

AMENDMENTS TO THE CLAIMS

Please replace the claims with the following amendments:

1. (Currently amended) A method of determining at least a first and a second gastro-intestinal conditions in a subject, the method comprising ~~the steps of:~~

administering to said subject a test meal comprising a labeled marker whose by-products are absorbed and exhaled in breaths of said subject after exit from the stomach of said subject;

performing on said subject a ~~first~~ breath test indicative of at least one of the first and the second gastro-intestinal conditions; and

~~performing on said subject at least a second breath test indicative of at least one of the first and the second gastro-intestinal conditions; and~~

determining the first and the second gastro-intestinal conditions in said subject ~~from the outcome of at least one of said first and said second breath tests.~~

2. (Currently amended) A method according to claim 1 and wherein at least one of said first and said second gastro-intestinal conditions comprises at least one of dyspepsia and irritable bowel syndrome.

3. (Currently amended) A method according to claim 1 and wherein at least one of said first and said second gastro-intestinal conditions comprises ~~includes~~ ~~arises from~~ at least one of a gastric emptying disorder, a gastric accommodation disorder, and a *Helicobacter pylori* infection.

4. (Currently amended) A method according to claim 1 and wherein at least one of said first and said second gastro-intestinal conditions comprises ~~includes~~ at least one of a sugar malabsorption disorder, a bacterial overgrowth, a gastric emptying rate, and an orececal transit time disorder.

5. (Original) A method according to claim 4 and wherein said sugar malabsorption disorder is at least one of lactose intolerance, fructose, intolerance, sucrose intolerance and maltose intolerance.

6. (Withdrawn) A substrate for isotopic breath tests, comprising an isotopically labeled material in a micro-encapsulated coating material, wherein the

properties of the micro-encapsulation coating material are chosen such that said isotopically labeled material is released in a predetermined part of the gastro-intestinal tract.

7. (Withdrawn) A substrate according to claim 6 and wherein said micro-encapsulation coating material is chosen such that it breaks down and releases the isotopically labeled material according to the pH value of the environment through which it is passing.

8. (Withdrawn) A substrate according to claim 7 and wherein said micro-encapsulation coating material is chosen such that it breaks down and releases the isotopically labeled material only after leaving the stomach of a subject.

9. (Withdrawn) A substrate according to claim 8 and wherein said isotopically labeled material is used as a marker for determining passage through the duodenum.

10. (Withdrawn) A substrate according to claim 6 and wherein said micro-encapsulation coating material is chosen such that it breaks down and releases the isotopically labeled material under the effect of enzymic action arising from the enzymic environment through which it is passing.

11. (Withdrawn) A substrate according to claim 10 and wherein said enzymes are those secreted by at least one of the pancreas and the gall bladder, such that said isotopically labeled material is used as a marker for determining passage through the duodenum.

12. (Withdrawn) A substrate according to claim 6 and wherein said micro-encapsulation.

13-70. (Cancelled).

71. (Previously Presented) A method according to claim 1, wherein determining of said second gastro-intestinal condition is based on the evaluation of said first gastro-intestinal condition.

72. (New) A method according to claim 1, wherein said first gastro-intestinal condition comprises gastric emptying and said second gastro-intestinal condition comprises gastric accommodation.

73. (New) A method according to claim 72, wherein said test meal comprises a liquid meal having a predetermined volume, at least one average gastric emptying characteristic of said meal for a large plurality of normal subjects being known,

wherein determining said first gastro-intestinal conditions comprises determining at least one emptying characteristic of said meal from the stomach of the subject,

and wherein determining said second gastro-intestinal conditions comprises determining the gastric accommodation of the subject according to the deviation between said at least one emptying characteristic of said meal from the stomach of said subject and said at least one average emptying characteristic of said meal for a large plurality of normal subjects.

74. (New) A method according to claim 73, and wherein said predetermined volume is sufficient to cause gastric distension in said subject.

75. (New) A method according to claim 73, and wherein said predetermined volume is at least 750 milliliters of liquid.

76. (New) A method according to claim 73, and wherein said liquid meal has a gastric retention characteristic arising from at least one of a predetermined pH, a predetermined calorific value and a predetermined composition of said liquid meal.

77. (New) A method according to claim 76, and wherein said predetermined pH is less than 3.0.

78. (New) A method according to claim 77, and wherein said predetermined calorific value is at least 200 kilocalories.

79. (New) A method according to claim 77, and wherein said predetermined composition is an isotonic composition.

80. (New) A method according to claim 71, wherein said test meal comprises at least two marker materials, a first material which is generally not absorbed in the subject's stomach, and which releases a gas in the presence of bacteria, and a second material operative to indicate location of said meal within the gastro-intestinal tract of the subject; wherein said breath test comprises detection, by means of said first marker material, the generation of said gas in said subject, and wherein said breath test further comprises detection, by means of said

second marker material, the position within the subject's gastro-intestinal tract at which said gas is generated.

81. (New) A method according to claim 80, and wherein said gas is hydrogen.

82. (New) A method according to claim 81, and wherein said breath test further comprises detection of a by-product of said second marker material, such that the position of said hydrogen generation in the gastro-intestinal tract of said subject is determined by the temporal relationship between the appearance of hydrogen and of the by-product of said second marker material in said subject's breath.

83. (New) A method according to claim 82, and wherein said second marker material is labeled with a carbon isotope, and said by-product is isotopically labeled carbon dioxide.

84. (New) A method according to claim 81, and wherein said first material is a sugar metabolized in the small intestine of said subject, such that the time of detection of said hydrogen relative to the time of detection of the second marker material is used to determine the presence of bacterial overgrowth in said small intestine.

85. (New) A method according to claim 84, and wherein said second material is a labeled sugar also metabolized in the small intestine of said subject, such that the generally concurrent appearance in the breath of said subject of hydrogen and a by-product of said second marker material is indicative of the presence of bacterial overgrowth in said subject.

86. (New) A method according to claim 84, and wherein said second material is a labeled sugar also metabolized in the small intestine of said subject, such that the appearance in the breath of said subject of a by-product of said second marker material significantly prior to the appearance of hydrogen is generally indicative of the absence of bacterial overgrowth in said subject.

87. (New) A method according to claim 84, and wherein said first material is at least one of glucose and lactulose.

88. (New) A method according to claim 84, and wherein said second material is at least one of labeled sodium acetate, sodium octanoate, glucose, a probe such as acetyl leucine, or a microencapsulated labeled substrate

89. (New) A method according to claim 81, and wherein said first material is a sugar generally not metabolized in the small intestine of said subject, such that the time of detection of hydrogen relative to the time of detection of said second marker material is used to determine the oro-caecal transit time of said subject.

90. (New) A method according to claim 81, and wherein said first material is a sugar of a group thought to be malabsorbed in the small intestine of said subject, such that it arrives essentially unabsorbed at the colon of said subject, where hydrogen is generated by the presence of colonic bacteria, such that the time of detection of hydrogen relative to the time of detection of the second marker material is used to determine a sugar intolerance in said subject.

91. (New) A method according to claim 90, and wherein said second material is an isotopically labeled material generally absorbed in the colon, such that the time of detection of hydrogen relative to the time of detection of said second marker material is used to determine a sugar intolerance in said subject.

92. (New) A method according to claim 91, and wherein said second material is xylose labeled with a carbon isotope, and said by-product is isotopically labeled carbon dioxide.

93. (New) A method according to claim 90, and wherein said second material is an isotopically labeled material generally absorbed in the small intestine, such that the relative time and quantity of detection of hydrogen and labeled by-products of said second marker material is used to determine whether said subject is suffering from one or both of a sugar intolerance and a bacterial overgrowth.

94. (New) A method according to claim 93, and wherein the time of detection of hydrogen, characteristic of a part of said first material in the presence of bacteria, relative to the time of detection of said labeled by-products of said second marker material is used to determine that said subject is suffering a bacterial overgrowth.

95. (New) A method according to claim 93, and wherein the detection of hydrogen later than the detection of said labeled by-products of said second marker material indicates that said subject is suffering from a sugar intolerance.

96. (New) A method according to claim 93, and wherein the time of detection of a first quantity of hydrogen, characteristic of said first material in the presence of bacteria,

relative to the time of detection of said labeled by-products of said second marker material is used to determine that said subject is suffering a sugar intolerance and a bacterial overgrowth.

97. (New) A method according to claim 90, and wherein said sugar is at least one of the group consisting of lactose, fructose, maltose and sucrose.

98. (New) A method according to claim 81, and wherein a by-product of said second marker material is also detected by means of a breath test, such that the position of said hydrogen generation in the gastro-intestinal tract of said subject is determined by the temporal relationship between the appearance of hydrogen and of a by-product of said marker material in said subject's breath.

99. (New) A method according to claim 98, and wherein said second marker material is labeled with a carbon isotope, and said by-product is isotopically labeled carbon dioxide.

100. (New) A method according to claim 81, and wherein said first material is a sugar that is not normally physiologically metabolized in the small intestine of said subject, such that the time of detection of said hydrogen relative to the time of detection of the second marker material indicating that the test meal is in the small intestine is used to determine the presence of bacterial overgrowth in said small intestine.

101. (New) A method according to claim 100, and wherein said second material is a labeled sugar also metabolized in the small intestine of said subject, such that the generally concurrent appearance in the breath of said subject of said hydrogen and a by-product of said second marker material is indicative of the presence of bacterial overgrowth in said subject.

102. (New) A method according to claim 100, and wherein said second material is a labeled sugar also metabolized in the small intestine of said subject, such that the appearance in the breath of said subject of a by-product of said second marker material significantly prior to the appearance of hydrogen is generally indicative of the absence of bacterial overgrowth in said subject.

103. (New) A method according to claim 100, and wherein said first material is at least one of glucose and lactulose.

104. (New) A method according to claim 100, and wherein said second material is at least one of labeled sodium acetate, sodium octanoate, glucose, a probe such as acetyl leucine, or a microencapsulated labeled substrate.

105. (New) A method according to claim 81, and wherein said first material is a sugar generally not metabolized in the small intestine of said subject, such that the time of detection of said hydrogen relative to the time of detection of said second marker material is used to determine the oro-caecal transit time of said subject.

106. (New) A method according to claim 81, wherein said first material is a sugar of a group thought to be malabsorbed in the small intestine of said subject, such that it arrives essentially unabsorbed at the colon of said subject, where hydrogen is generated by the presence of colonic bacteria, such that the time of detection of hydrogen relative to the time of detection of the second marker material is used to determine a sugar intolerance in said subject.

107. (New) A method according to claim 106, and wherein said second material is an isotopically labeled material generally absorbed in the colon, such that the time of detection of hydrogen relative to the time of detection of said second marker material is used to determine a sugar intolerance in said subject.

108. (New) A method according to claim 107, and wherein said second material is xylose labeled with a carbon isotope, and said by-product is isotopically labeled carbon dioxide.

109. (New) A method according to claim 106, and wherein said second material is an isotopically labeled material generally absorbed in the small intestine, such that the relative time and quantity of detection of hydrogen and labeled by-products of said second marker material is used to determine whether said subject is suffering from one or both of a sugar intolerance and a bacterial overgrowth.

110. (New) A method according to claim 109, and wherein the time of detection of hydrogen, characteristic of a part of said first material in the presence of bacteria, relative to the time of detection of said labeled by-products of said second marker material is used to determine that said subject is suffering a bacterial overgrowth.

111. (New) A method according to claim 109, and wherein the detection of hydrogen later than the detection of said labeled by-products of said second marker material indicates that said subject is suffering from a sugar intolerance.

112. (New) A method according to claim 109, and wherein the time of detection of a first quantity of hydrogen, characteristic of said first material in the presence of bacteria, relative to the time of detection of said labeled by-products of said second marker material is used to determine that said subject is suffering a sugar intolerance and a bacterial overgrowth.

113. (New) A method according to claim 106, and wherein said sugar is at least one of the group consisting of lactose, fructose, maltose and sucrose.